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CENTRAL INTELLIGENCE AGENCY

REPORT NO

INFORMATION REPORT

CD NO.

COUNTRY USSR/Outer Mongolia

DATE DISTR. / FEB 1954

SUBJECT The Akshin Highway Construction Project

NO. OF PAGES 8

PLACE ACQUIRED

NO. OF ENCLS. (LISTED BELOW)

DATE ACQUIRED BY

SUPPLEMENT TO REPORT NO.

DATE OF INFOR

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The Old Akshin Highway

1. "The starting point of the Akshin Highway was the railroad station Darasun on the Transbaikal Railroad. It was an ordinary dirt road, improved in places, and was 60 miles away from the important Oblast center and railroad station of Chita. The road followed the tracks of the Chita-Darasun-Khabarovsk railway and intersected the tracks at eight grade crossings. Traffic was light on this road as all freight consigned for the Akshin Highway was shipped by rail to Darasun and transshipped from there. Freight was greatly delayed by the train movement on the railroad line and the highway authorities realized the necessity of relocating the road away from the tracks. A survey was made and a course was plotted 3 to 5 kilometers to the right of the old road which did not cross the railroad until it reached Darasun. However, the relocation project was not put into effect and maintenance and improvements of the Akshin Highway were given priority.

2. On leaving Darasun, the road crossed the Ingoda River over a wooden bridge 100 meters long. About 80 kilometers from the Darasun station, the highway passed through the resort town, Darasum, and crossed the Onon River near the village and rayon center, Akshn. The road then follwed a stretch of very broken terrain to the settlement of Verkhne Ulkhun. . Here again it crossed the Onon River and after passing through the villages of Mangut and Khapcheranga, it reached the settlement of Kiren. Crossing of the Onon River was accomplished by means of small ferry boats as there were no bridges. The small ferry boats had a carrying capacity of one truck.

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Darasun-Khapcheranga Freight Highway

3. In 1934 deposits of tin ore were discovered in the Khapcheranga mountains on the border of Mongolia. Exploitation of the deposits was immediately begun. Large quantities of equipment were freighted to Khapcheranga. Obviously the existing old road could not carry the greatly increased traffic. Consideration was given to building a highway which would connect Khapcheranga with the Darasun station over the most direct and convenient course. The highway authorities initiated a survey, which was carried out in 1934. The layout of the old road was taken into account in planning the international freight highway between Darasun and Khapcheranga.

4. The highway was classified as a 3rd class road. The width of the right-of-way was to be 8 meters. The width of the road was to be 6 meters. The maximum up grade was set at 7%. The highway was to be covered with gravel to a depth of 17 centimeters and have a crown. All of the buildings were to be of wood and bridges were to be of the girder type.

5. Work on the highway began in 1935 and was carried out by local hired labor and by one mechanized highway detachment which was equipped with 25 Becker shovels and three heavy-duty 12-feet trailer graders. 25X1

6. Some work on the highway was completed during 1935 and continued into 1936. During the same period repairs on the Chita-Darasun road got under way. Early in the summer of 1936 changes in the plans and the direction of the highway occurred. 25X1
construction management was notified by the Main Highway Administration that
project was to be visited by a commission from Leningrad. The commission was headed by the deputy chief of the NKVD for the Eastern Siberia Kray. It consisted of several members of the NKVD and two engineers of the Kray Highway Department. The NKVD arrived at Aksha in uniform but immediately changed into civilian clothing and, with the two engineers, departed by car for unknown destinations.

7. The commission returned in two days and asked their engineers to give a preliminary estimate of the requirements for materials, equipment, machinery, fuel, and labor for the construction of the highway from the USSR border to the town of Undurkhan in Mongolia. 25X1
It was then the engineers that they had gone over two alternate routes along the south and north banks of the Ul'za River. The commission accepted the road along the south bank of the Ul'za considering it to be the easier of the two. They spoke very little of their trip, saying only that they had avoided all populated points and had slept in their cars.

8. We soon received orders from the Main Highway Administration to begin immediately relaying construction of the Darasun-Khapcheranga Highway. It was reclassified as a second class highway and its terminal was to be changed from Mangut to Nizhney Ul'khur. Sites for the bridges were selected near Darasun over the Ingoda River and near Nizhney Ul'khun over the Onon River. Work on the highway was to be started immediately and means of temporary winter transport over the highway were to be provided. The bridge over the Ingoda River near Darasun was to be located 200 meters below the old bridge. The bridge over Onon River was to be built on USSR territory notwithstanding the fact that this would lengthen the highway by 11 kilometers. Both bridges were to be of a cross-bar K trusses on concrete caissons and were approximately 100 meters in length and of five spans. 25X1 25X1 25X1

9. The highway was considered of great strategic importance. Rumors around the construction site were that a war with Japan was imminent. However, when the danger of war lessened, we were ordered to discontinue the building of temporary transport lanes. This also gave the USSR additional time to build two other highways, the Ul'za-Bayan Tuman and the Altan Bulak-Ulan Bator.

10. A group of surveyors from the Eastern Siberia Kray highway were attached to our construction group and placed at the disposal of the technical manager. The following specifications were agreed upon: width of right of way - 10 meters; width of road way - 8 meters; maximum grades - 5 per cent; gravel pavement up to 24 centimeters in depth; and crescent shaped. All structures and other buildings were to be made of wood. In building the road it was planned to make all possible use

of the completed sections of the Darasun-Khapcheranga freight highway. However, the necessity of changing the grades from 7 per cent to 5 per cent caused a number of sections to be abandoned even though the road had already been paved and had completed structures. The newly arrived group of surveyors were immediately sent to Mongolia where they started to make a survey and draw up plans for the USSR border-Undurkhan highway. This section of the highway was classified as a 3rd class road.

11. The greatly increased construction program and the extremely tight schedules resulted in a reorganization of the technical management and the field personnel. As the management apparatus grew and the number of departments increased likewise, the Party representatives became more numerous. The structure of the organization was changed. The construction works on USSR territory were broken up to three sections, each 110 kilometers long. Each section had its own management, technical staff, supply service, and bookkeeping records. Each section was subdivided into divisions, 20 to 25 kilometers long, depending on the amount of work involved. Large structures sometimes were set up as a separate section or division. The Mongolian portion was likewise split into three sections of 100 to 110 kilometers each. The sections were numbered from 1 to 6 inclusive and the construction in Mongolia was not regarded as a separate unit but as part of the general plan of the Akshin Highway.

12. New engineering and technical personnel began arriving at the construction site. As the staff grew, work on the Soviet sections of the road progressed rapidly. A repair shop for motor vehicles and machinery was set up near the Darasun station. Late in the fall of 1936 a special section was set up for the construction of the Onon River bridge. However, trouble was not long in coming. The third section had laid out a right of way near the village of Mangut and had partly finished the road bed. It was then that the chief of the Mangut frontier detachment of the NKVD lodged a protest. The road builders had laid the road right across his airfield, bisecting it. This was the first that the road builders had heard about the existence of an airfield. The Mangut airfield was just a natural leveled field about 6 sq. kilometers. There were no structures on it. It was only late in the fall of 1936 that semi-dugout type buildings appeared. The ground was firm and gravelly with good drainage and covered with 5 to 10 centimeters of alluvium. Naturally it was necessary to move the highway and circle the airfield on its right.

13. Setting up the construction apparatus for building the Onon River bridge on the USSR side did not present any difficulties. The builders established an office in the village of Nizhney'Ul'khan and began working. However, the crew assigned to Mongolia, that is, the personnel of the 4th, 5th, and 6th sections, arrived in the village of Nizhney'Ul'khan and waited for permission to cross the border. Since there was no custom house in the vicinity, the waiting continued for a whole month for clearance from the Ministry of Foreign Affairs of the USSR. During this period of delay, the Mangut frontier detachment of the NKVD set up a border traffic check point in lieu of a custom house. The personnel of the fourth section was not allowed to remain idle. They built a large ferry with a capacity of four motor vehicles and organized a ferrying service across the Onon near the traffic check point. This service worked effectively during the entire period of construction, except during the winter months, and up to the opening of the bridge over the Onon.

Financing the Construction

14. Financing the construction, both on the Soviet and the Mongolian sides, was carried out by the Finance Department of the USSR in accordance with the estimate of the construction administration. Because Soviet currency was not accepted as legal tender in Mongolia, the finance section of the construction administration was notified of all expenditures, including wages and living expenses of employees, and these sums were entered to the credit of the respective persons and the employee was reimbursed only when he returned to Soviet territory.

15. Mongolia had its own currency - tugriks and mungus. One tugrik was worth 1.31 Soviet rubles. Beginning in 1937 all highway construction workers received 10% of their pay in Mongolian currency. The equivalent of these payments in Soviet currency was deducted from their salaries. Mongolian currency had to be spent in Mongolia -- it could not be taken into the USSR. It is difficult to say

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whether the Mongolians shared in the expenditures of the construction as there was absolutely no evidence of it. The construction was carried out semi-secretly as far as the Mongolians were concerned. We were not permitted to talk to them about the work. The Mongolians knew, however, that the road was not being built for their use.

16. Food, with the exception of meat, for the construction workers in Mongolia was supplied from the USSR. By agreement the Mongolians supplied cattle on the hoof (steer, yaks, sheep and goats) at the cost of 30 kopeks per kilogram of livestock. While the supply of food from the USSR occasionally suffered from interruptions, the Mongolian cattle were always delivered on time and we never had any shortage of meat. Each time cattle were delivered a certificate was drawn up and forwarded to the construction management. The Mongolian also supplied us with large quantities of underwear, clothing, shoes, shoe leather, cloth, and other minor consumer goods. The goods were purchased by the construction supply department and placed in a warehouse of the 4th section. None of the goods, including meat, could be taken to the USSR.

Inventories, transportation, and machinery

17. Our preliminary calculations on the requirements for machinery, transportation, and so forth, began to show results. Equipment and machinery started arriving. First of all, we received 250 three-ton Zis trucks which was more than the estimate. Because the surveying had not yet been completed, it was impossible to utilize all the trucks so part of them were put to work and the remainder were put in storage. After a few days all of the work trucks broke down. The tires gave out. The trucks were equipped with tires of synthetic rubber which, in this terrain, did not last more than a week and patching them with rubber was also useless.

18. In order to carry on the construction work we removed the tires from the trucks that were in storage and after a few days these too were ruined. Now all the trucks were out of commission. They were jacked up on blocks and left that way. Naturally a commission showed up immediately to determine if this was the work of saboteurs or enemies of the people. Of course everyone knew the tires were worthless. A month passed before we received new tires which were of a somewhat better quality. In the meantime another 150 three-ton Zis trucks had arrived and machinery for the equipment of a repair shop and mechanized road teams began reaching our project. The machinery received was utterly unsatisfactory as to selection, quantity, and quality. For example: the trucks we received were intended for carrying stones to surface the roads. However, because they lacked hydraulic hoists and because there was no equipment for loading gravel, all of the work had to be done by hand. There were also very few measuring instruments, insufficient quantity of tools, and an extremely poor quality of those that were available.

19. To construct a road in a remote area as this, a large supply of local labor and mechanized road teams were a necessity. Our mechanized road teams had no essential equipment, such as bulldozers, motorized graders, etc. All of the work had to be done by heavy trailer-graders and by Becker power shovels. This did not always meet the requirements.

Materials

20. Certain materials were delivered from the central distribution plant upon request of the Main Highway Department. These were steel, cement, fittings, repair shop equipment, window panes, gasoline, and lubricating oils. The supply of materials from central distribution points was not dependable and the quantities of steel delivered amounted to only 50% of our needs. Workmen had to remove metal parts from previously completed structures. The supplies came from the Darasun station and travelled the average distance of 150 kilometers on Soviet territory and 460 kilometers on Mongolian territory. The daily consumption of gasoline and lubricating oil amounted to 30 tons. Gasoline was brought in by truck convoys and supplied from barrels (no tanks were available). In Mongolia a three-day supply of gasoline was placed in cisterns that were located along stretches of road where work was actually in progress.

21. The greatest difficulties in obtaining local materials were encountered in getting lumber. Lumber had to be carted about 120 kilometers as there was no motorized equipment to deliver it. Neither were there any trailers which could be attached to trucks. It was, therefore, necessary to adapt the three-ton Zis trucks to bring lumber. This was done thus; two logs were fastened firmly to the bottom of the truck, one in the front and one in the rear so that their ends protruded beyond the body of the truck. Lumber was then loaded on the protruding logs. Loading and unloading had to be done simultaneously, otherwise the truck would turn over. The central part of the body was loaded with short pieces of lumber. Once the trucks were loaded, the doors of the cab could not be opened so the driver had to take his place before the loading began. If the loads were not too high, he could get out of the cab by climbing out of the window. Actually he was a prisoner in his cab. Such loaded trucks were nicknamed "diptera" and from a distance they looked like funny broad insects crawling along the earth. Naturally this method of carting lumber damaged the trucks.

22. Stones used to pave the roadway consisted of gravel, shale and eroded granite rocks. When no other material was available, shale, which was plentiful, was used. Because it eroded easily and became very dusty, we avoided the use of shale as much as possible. Gravel was found on the banks of the Onon River and on several hills. The gravel consisted of rounded pebbles up to 5 centimeters in diameter and did not lend itself well to smoothing. A minimum of 10 to 15% of clay shale was added to it. Stones were carried to the site over an average distance of 3 to 6 kilometers.

23. The problem of providing a temporary thoroughfare by winter was great. Only 2½ months remained until freezing weather. The management of the construction took this into account and resolved to work around the clock or rather to work two shifts of 10 hours with a two-hour break between shifts for repair and servicing the machinery. It was known at that time that the motor transports, mechanized road crews, and convict laborers would soon arrive at the construction site. Work on the USSR side was partly completed but the situation on the Mongolian side was much worse. The month of August 1936 had begun but the construction crew still not at the frontier awaiting permission to cross the border and had not even looked over their course. There were additional reasons why the situation on the Mongolian side was bad. At the beginning of the work, the chief of the NKVD for the Eastern Siberia Kray liquidated the 5th section for their failure to organize their work and transferred its functions to the 4th section. A month later the same chief liquidated the 6th section for inefficiency and these functions too were transferred to the 4th section. As a consequence of having been assigned the work of the 5th and 6th sections, the 4th section was obliged to discard the breakdown into divisions and introduce, instead, the "guild" method; that is, combined the jobs into groups according to the character of the work. A superintendent was placed in charge of each group; for example, preparation of the dirt roadbed, engineering structures, paving of the road, civil construction, logging, and finishing the road. This system had its advantages. First it satisfied the basic rules for the construction of strategic roads; second, one section at a time was completed and it did not spread unfinished work over the entire course. Because only unskilled labor was available, productivity was increased by having each worker permanently assigned to the same job. Towards the end of September the order concerning a temporary roadway was cancelled but the tempo of the work remained the same. The engineering personnel, not numerous in itself, was heavily burdened by the necessity of preparing yearly, quarterly, and monthly schedules and also by having to attend political conferences. These lasted 5 to 6 hours and did no good to anyone except the loafers from the Party cells. Notwithstanding the fact that the laborers were unskilled, they were set production quotas usually applied to skilled labor. That is, the quotas were gradually increased by the artificially created Stakhanov movement.

24. In order to raise production quotas, and these limits had the elasticity of rubber, the quotas were artificially inflated. Usually a workman close to the Party clique was selected. Several engineers and technicians were given the task of preparing the work for the setting up of a Stakhanov quota. The group worked out the plans for the work area, location and production of materials, and especially placed assistant workmen so as to minimize the number of motions of the Stakhanovite worker. The workmen, in turn, practiced daily these definite motions until everything and everybody was in place. The day of the performance arrived. A commission for setting up quotas was also present. It goes without saying that the Stakhanovite, whose motions had been

reduced to a minimum, produced excessively high quotas, but even so he was unable to keep up the pace for more than two days. The management knew this also and he usually stopped the work after one or two days. The management then announced new production quotas, failing to mention that in order to meet these quotas, the workmen would have to have several assistant workmen and the work supervised and directed by engineers and technicians.

25. Machines must also work and work effectively. Technical personnel was held responsible for any machines standing idle and also had to think up excuses for any machine that could no longer be used for its original purpose. All of this was caused by shortages of machinery and, in general, at attempts constantly made to utilize machinery for tasks other than originally intended.

Specialists and Additional Labor Forces

26. The Transbaikal area, like all of Siberia, had no reserves of specialists. The Main Highway Administration recruited them from the European part of the USSR. Usually the specialists were taken off projects near completion or reappointed to the construction site upon graduation from educational institutes. However, many of the specialists were so-called "flyers". This is a definite contingent of engineers and technicians, mostly Soviet educated, who do not like to work but like to receive large salaries. Usually they gladly accept positions in remote locations where the pay is high and also because they receive travel money, 2nd class railroad fare (depending on the zone) including wages in advance for six weeks or two months. These "flyers" would hang around the construction site for a short period, dodging any specific assignment, and in about six months take up another position in a different area, therefore, collecting large travelling expenses. They were well aware that they had better not linger at any construction site as there was an unwritten law, known to all construction workers, that it was not safe to stay on one job for more than a year.

27. There were cases on record where the Main Administration of Camps (Gulag) temporarily sold jailed engineers, with wide experiences, to various construction projects. One such engineer was sold to our construction administration. He occupied the post of chief engineer of the 3rd section. He did not work very long as both he and his section chief liked to drink. Once while drunk the two drove out to examine the course and his car overturned and the section chief was badly injured. The engineer was removed from the construction project and sent back to jail. The Chief Administration of Camps (Gulag) collected the salaries of the engineer and paid them 2.50 rubles per day which was supposed to cover all of his expenses, including food and clothing. Construction chiefs often set aside something for such men but it was not obligatory and depended entirely on the feelings of the chief.

28. Specialists for work on road construction machinery were recruited in Leningrad. This was the cradle of organizers of mechanized road teams. The best chiefs of such teams, who had trained cadres of specialists, mechanics, and workmen, came from Leningrad. It was natural that the best specialists on road construction machinery would gather around such men. Drivers of vehicles were not hard to get and were hired through advertisements appearing in the European USSR newspapers.

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29. In October 1936 the first trainload of laborers arrived at the construction site. These men were petty offenders (bytoviki) and were known to us from previous constructions. They came from Stavropol and were not those mentioned previously

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30. In order to quarter these groups across the Mongolian border. no preparations whatsoever had been made in Mongolia for the reception of these workmen. We had orders to conceal the fact, from the Mongolians, that these workmen were convicts. The technical management of the construction arrived at an agreement with the Chief Administration of Camps whereby life for the convicts was made somewhat easier. At first they slept in the woods without any shelter, summer

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weather made this possible. Later they were quartered in barracks of a semi-dugout type. A bath house and a delousing station were established on the USSR border and all subsequent arrivals, usually in a state of total exhaustion, famished, and clad in dirty rags, were put through the sanitary processing. Sometimes the convicts were guarded and attended by other convicts but mostly by soldiers or Party members.

31. A system was organized whereby convicts, who surpassed their daily quotas, had their jail terms shortened, and after serving half of their sentence they were permitted to petition for release upon recommendation from the construction management. An example where a convict who surpassed his work quota had his jail sentence shortened was: a convict sentenced to five years exceeded his quota during one year and his term was reduced for three months retroactively; that is, for nine months of work, he was credited with one year of jail sentence. Every convict, except those who were sentenced under Article 58, could petition for an early release upon recommendation from the chief of construction. [redacted]any instances of such early releases granted but usually after considerable delay. All of the convicts were anxious to exceed the work quota and the performance was on par with that of other workmen. However, in 1937 two trainloads of "urk" or urkaran" convicts arrived at the construction site. They were so designated because they were all non-political criminals; that is, they were thiefs, robbers, murderers, etc. They considered themselves lords among the convicts because the "Gulag" and NKVD favored them as their social equals.

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32. The criminals immediately established a very unpleasant relationship with the technical staff. They refused to work and those who did show up to work, sabotaged it and demanded that the technical personnel put down their names as having exceeded production quotas. There were also instances of sale of tools to the Mongolians and of thefts from the Mongolians. The "Gulag" brought its own guards. The guards did not bring any quiet and order but instead caused still more trouble. The "Gulag" guards, who had been trained in the method of guarding concentration camps, applied the same methods at the construction site. They demanded that convicts be sent to work in groups and under guard while the nature of the work required that the workmen be spread singly or in two's over large sections of the road. This situation continued until the end of the working season in 1937 when the basic work was completed and the more active "urks" were removed from Mongolia.

33. The diet of the convicts located in Mongolia was more than satisfactory and contrary to conditions in the USSR. The "Gulag" had set a rate of 2.50 rubles per day for the upkeep of each convict. This included food, clothing, and a 10% deduction for savings which was paid back to the convicts upon their release. The cheapest food in Mongolia was meat. A kilogram of Mongolian meat of better than average fat content cost about 70 kopeks net weight. The Soviet salted fish "gurbusha" (a species of salmon formerly used for fertilizer), which was disgusting and non-nourishing, cost about 2 rubles. Mongolia became the promised land for the convicts, and there was no worse punishment than to be sent back to the Soviet side with their salted fish. Being well fed, the convicts with few exceptions, exceeded production quotas. It must be admitted, however, that the technical supervisors often boosted production figures inasmuch as individual production quotas were very difficult to obtain.

Civil Construction and Operation of the Highway

34. It was planned to operate the highway between the border of the USSR and Undur Khan in Mongolia with maintenance crews. A road foreman was given a crew of workmen, means of transportation and maintenance machinery, and was assigned a section of about 50 to 60 kilometers. Five stations for road foremen were constructed along the road. Each had living quarters for the foreman and the crew, storehouses, an icehouse, and a shed for the machinery. Special attention was given to wells. The central part of Mongolia had a dearth of fresh water and there is no permanent water supply between the 160th kilometer at the Ul'za River and Undur Khan. In order to have an adequate supply for any military unit which may use the highway, two wells were dug at each station.